

Practitioner's Docket No. 408445

Amendments to the Claims

1. (Currently Amended) A genetic construct system for use in transforming host plant cells, comprising:
 - a. a positive selectable marker gene that when transformed into the host plant cells facilitates growth on a positive selective medium that is complementary to the positive selective marker gene,
 - b. a negative selectable marker gene that when rendered operable in the host plant cells hinders growth on a negative selective medium that is complementary to the negative selectable marker, the negative selectable marker being different in kind from the positive selectable marker, ~~and~~
 - c. two direct repeats of a non-native gene of interest with respect to the in-a host plant cells cell, the direct repeats being effective for use in recombination with the genome of the host plant cells, said direct repeats immediately flanking the positive and negative selectable marker genes of (a) and (b), and
the host plant cells.
2. (Currently Amended) The genetic construct system of claim 1 wherein the negative selectable marker gene is CodA.
3. (Currently Amended) The genetic construct system of claim 2 wherein the positive selectable marker gene is NPTII, BAR, PAT or EPSP synthase
4. (Currently Amended) A method of removing selectable marker genes from transformed eukaryotic plant cells which comprises:
 - a. transforming plant cells with a genetic construct ~~of claim 1~~ that includes
a positive selectable marker gene that when transformed into the plant cells facilitates growth on a positive selective medium that is complementary to the positive selective marker gene,
a negative selectable marker gene that when rendered operable in the plant cells hinders growth on a negative selective medium that is complementary to the negative

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selectable marker, the negative selectable marker being different in kind from the positive selectable marker, and

two direct repeats of a non-native gene of interest with respect to the plant cells the direct repeats being effective for use in recombination with the genome of the host plant cell, one of said direct repeats immediately flanking the positive selectable marker gene and the other of said direct repeats immediately flanking said negative selectable marker gene,

to provide transformed plant cells;

- b. culturing the transformed plant cells of (a) on a positive selective medium,
- c. transferring the transformed plant cells in (b) onto a negative selective medium, and
- d. selecting the transformed plant cells that grow on the negative selective medium

wherein the selected transformed plant cells that grow on the negative selective medium contain the gene sequence of interest but neither the positive selectable marker sequence nor the negative selectable marker sequence.

5. (Original) The method of claim 4 wherein the negative selectable marker gene is CodA.

6. (Currently Amended) The genetic construct system of claim 1, wherein said construct comprises a polynucleotide sequence in the 5' to 3' (right to left) direction:

- a. a gene sequence of interest,
- b. a positive selectable marker sequence,
- c. a negative selectable marker sequence and
- d. a repeat of the gene sequence of interest in (a) above.

7. (Currently Amended) The genetic construct system of claim 6 wherein the negative selectable marker sequence is CodA.

8. (Currently Amended) A method of removing selectable marker genes from transformed plant cells which comprises:

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a. transforming plant cells with a genetic construct ~~of claim 1~~ to form T0 transformants, wherein the genetic construct includes

a positive selectable marker gene that when transformed into the plant cells facilitates growth on a positive selective medium that is complementary to the positive selectable marker gene,

a negative selectable marker gene that when rendered operable in the plant cells hinders growth on a negative selective medium that is complementary to the negative selectable marker, the negative selectable marker being different in kind from the positive selectable marker, and

two direct repeats of a gene of interest, the direct repeats being effective for use in recombination with the genome of the host plant cells, one of said direct repeats immediately flanking the positive selectable marker gene and the other of said direct repeats immediately flanking said negative selectable marker gene,

b. culturing the plant cells of (a) on a positive selective medium,

c. selecting the T0 transformant cells that grow on the positive selective medium,

d. regenerating a fertile T0 plant from the T0 transformant cells whereby T1 seed is formed,

e. collecting the T1 seed from the T0 plant or the seed from a subsequent Tn generation plant wherein n is a whole number greater than one,

f. germinating the T1 seeds or Tn seeds on a negative selective medium to form seedlings, and

g. selecting the seedlings that grow on the negative selective medium wherein the selected seedlings contain the gene sequence of interest but neither the positive selectable marker sequence nor the negative selectable marker sequence.

9. (Original) The method of claim 8 wherein the negative selectable marker gene is CodA and the negative selective medium comprises 5-fluorocytosine.

10. (Currently Amended) The genetic construct system of claim 1, wherein said construct comprises, in the 5' to 3' direction (left to right), the formula:

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GI-PS-NS-GI

wherein GI represents a gene of interest, PS represents a positive selectable marker gene and NS represents a negative selectable marker gene.

11. (Currently Amended) The genetic construct system of claim 10 wherein NS is CodA.

12. (Currently Amended) The genetic construct system of claim 1, wherein said construct comprises, in the 5' to 3' direction (left to right), the formula:

GI-NS-PS-GI

wherein GI represents a gene of interest, NS represents a negative selectable marker gene, and PS represents a positive selectable marker gene.

13. (Currently Amended) The genetic construct system of claim 12 wherein NS is CodA.

14. (Currently Amended) The genetic construct system of claim 1, wherein said construct comprises, in the 5' to 3' direction (left to right), the formula:

AGx-GI-PS-NS-GI-AG'y

wherein AG and AG' represent additional genes of interest, x represents an integer of 1 or larger, y represents an integer of 0 or larger, GI represents a gene of interest, NS represents a negative selectable marker gene, and PS represents a positive selectable marker gene.

15. (Currently Amended) The genetic construct system of claim 14 wherein the genes represented by AG and AG' are never the same.

16. (Currently Amended) The genetic construct system of claim 14 wherein the NS is CodA.

17. (Original) The method of claim 4 wherein the eukaryotic cell is a plant cell.

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18. (Previously Presented) The method of claim 17 wherein the plant cell is a corn, soybean, cotton, wheat, canola, tobacco, Arabidopsis, rice, safflower or sunflower cell.

19. (Original) The method of claim 8 wherein the plant cell is a monocot or dicot cell.

20. (Previously Presented) The method of claim 19 wherein the plant cell is a corn, soybean, cotton, wheat, canola, tobacco, Arabidopsis, rice, safflower or sunflower cell.

21. (New) A genetic construct for use in transforming cells, comprising:

a. a positive selectable marker gene that when transformed into the cells facilitates growth on a positive selective medium that is complementary to the positive selective marker gene,

b. a negative selectable marker gene that when rendered operable in the cells hinders growth on a negative selective medium that is complementary to the negative selectable marker, the negative selectable marker being different in kind from the positive selectable marker, and

c. two direct repeats of a gene of interest in a host cell, the direct repeats being effective for use in recombination with the genome of the host cells, said direct repeats immediately flanking the positive and negative selectable marker genes of (a) and (b),

wherein the negative selectable marker gene is CodA.